

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-21 (Canceled)

Claim 22 (New): An Impedance cell sizing apparatus for characterizing particles suspended in a liquid, comprising a housing with a mixing chamber and a collection chamber separated by a polymer membrane containing an orifice for passage of the particles between the mixing chamber and the collection chamber for impedance determination of the particles wherein the deviation of the orifice diameter along a longitudinal axis of the orifice ranges from $\pm 1\%$ to $\pm 10\%$ whereby a substantially homogenous electrical field at the centre of the orifice is provided.

Claim 23 (New): An Impedance cell sizing apparatus according to claim 22, wherein the orifice has rounded edges at one of the sides of the membrane whereby perturbations of an electrical field at the orifice entrance are minimised and a substantially homogenous electrical field at the centre of the orifice are provided.

Claim 24 (New): An Impedance cell sizing apparatus according to claim 23, wherein the radius of curvature of the rounded edges is substantially equal to $\frac{1}{4}$ 'th the diameter of the orifice.

Claim 25 (New): An Impedance cell sizing apparatus according to claim 22, wherein the surface roughness of the internal surface of the orifice is in the range from 0 μm to 5 μm whereby a substantially homogenous electrical field at the centre of the orifice may be provided.

Claim 26 (New): An impedance cell sizing apparatus according to claim 22, wherein the orifice diameter outside the rounding ranges from 10 μm to 1000 μm , such as from 30 μm to 75 μm , such as app. equal to 50 μm .

Claim 27 (New): An impedance cell sizing apparatus according to claim 22, wherein the orifice diameter outside the rounding ranges from 5 μm to 200 μm , such as from 10 μm to 50 μm , such as app. equal to 50 μm .

Claim 28 (New): An impedance cell sizing apparatus according to claim 22, wherein the orifice length ranges from 1 μm to 1000 μm , such as app. equal to 50 μm .

Claim 29 (New): An Impedance cell sizing apparatus according to claim 22, wherein the membrane is positioned in a single-use cartridge.

Claim 30 (New): An Impedance cell sizing apparatus according to claim 22, further comprising

a bore in the outer surface of the housing for entrance of the liquid sample, communicating with

a sampling member positioned in the housing for sampling the liquid sample and having a cavity for receiving and holding the liquid sample, the member being movably positioned in relation to the housing in such a way that, in a first position, the cavity is in communication with the bore for entrance of the liquid sample into the cavity, and, in a second position, the cavity is in communication with the mixing chamber for discharge of the liquid sample into the mixing chamber.